access points may be implemented as well. Wireless access points **110**A-D may also be configured to serve cells using a WLAN technology, such as WiFi (for example, the IEEE 802.11 series of standards), as well as any other radio access technology capable of serving a cell. When the evolved Node B (eNB) type base station is used, the base station may be configured in accordance with standards, including the Long Term Evolution (LTE) standards, such as 3GPP TS 36.201, Evolved Universal Terrestrial Radio Access (E-UTRA); Long Term Evolution (LTE) physical layer; General description, 3GPP TS 36.211, Evolved Universal Terrestrial Radio Access (E-UTRA); Physical channels and modulation, 3GPP TS 36.212, Evolved Universal Terrestrial Radio Access (E-UTRA); Multiplexing and channel coding, 3GPP TS 36.213, Evolved Universal Terrestrial Radio Access (E-UTRA); Physical layer procedures, 3GPP TS 36.214, Evolved Universal Terrestrial Radio Access (E-UTRA); Physical layer—Measurements, and any subsequent additions or revisions to these and other 3GPP series of standards (collectively referred to as LTE standards). Wireless access points **110**A-D may have wired and/or wireless backhaul links to other networks and/or network nodes including a core network, a network management entity, and the like.

[0027] In some example embodiments in which multiple carriers and/or RATs may be defined for measurements purposes, the carriers/RATs may be categorized into at least two different categories, such as a high priority and a low priority, although other categories and/or priority schemes may be used as well. Based on the category (and thus priority), the user equipment may perform measurements differently as noted. For example, measurements targeted for the carriers/RATs indicated as having high priority may be performed during measurement gaps when measurement gaps are needed/used (or with an additional radio receiver branch at the user equipment if present). However, for other measurements, for carriers/RATs that are indicated as having a low priority (which may be indicated as so-called additional or new neighbor carriers/RATs), these lower priority cell measurements may be performed when the user equipment has entered into a connected mode DRX (during the inactive transmission time of DRX), an IDLE mode, and/or any other non-measurement gap period. Although some of the examples described herein refer to two categories, other quantities of categories may be used as well

[0028] FIG. **2** depicts an example process **200** for monitoring, in accordance with some example embodiments. The description of process **200** also refers to FIG. **1**.

[0029] At **205**, a user equipment may receive measurement configuration information for a plurality of carriers/radio access technologies, in accordance with some example embodiments. For example, user equipment **114**C may receive from the network (for example, a base station via signaling or a broadcast) measurement configuration information instructing/indicating to user equipment **114**C that it may monitor the carriers/RATs of neighboring cells including wireless access points **110**A-D. Moreover, this configuration may indicate that some of the carriers are high priority carriers to be measured during the measurement gaps, while low priority carriers may be measured at times other than the measurement gaps. To illustrate with an example, the configuration information may indicate that carriers for wireless access point **110**A-C may be monitored as high priority carriers, while the carrier from wireless access point **110**D may be monitored as a low priority carrier.

[0030] Although **205** describes the measurement configuration being provided by the network, the user equipment may receive the measurement configuration information in other ways (for example, specified in a standard and the like). In addition, the indication of the priority order of the carriers/frequency may be provided in a variety of ways including for example using IDLE mode priorities, extending a measurement object to indicate whether a carrier frequency is a high priority or a low priority, and the like.

[0031] If a carrier/radio access technology is a high priority carrier, user equipment **114**C may monitor the high priority carrier during the measurement gaps, in accordance with some example embodiments (yes at **220** and **225**). Referring to the previous example, user equipment **114**C may monitor carriers from wireless access points **110**A-C during measurement gaps. For example, user equipment **114**C may cease active transmission during a measurement gap and tune to another carrier frequency to measure one or more of carriers from wireless access points **110**A-C. When the user equipment is applying gap-assisted measurements during active time (for example, not applying DRX or not in IDLE mode), the user equipment may be configured to only measure higher priority carriers, in some example embodiments.

[0032] If a carrier/radio access technology is a low priority carrier, user equipment **114**C may monitor the low priority carrier at times other than the measurement gaps, in accordance with some example embodiments (no at **220** and **230**). Referring to the previous example, user equipment **114**C may monitor the carrier from wireless access points **110**D during times other than the measurement gaps. For example, user equipment **114**C may, during an IDLE mode or a DRX connected mode (for example, during an inactive transmission time of the DRX when the DRX inactivity timer expires) monitor wireless access point **110**D. Moreover, this low priority monitoring may be considered as best efforts in the sense that user equipment **114**C may perform the low priority carrier monitoring when it can.

[0033] In some example embodiments, high priority measurements (targeted to higher priority layers) may be those types of measurements that are important to basic mobility performance and a network's key performance indicators, while the lower priority measurements may be targeted to for example offloading layers and the like.

[0034] In some example embodiments, user equipment **114**C may not enable lower priority measurements at **230** on carrier(s)/RATs until user equipment **114**C enters into for example a DRX and/or the IDLE mode is activated. When this is the case, user equipment **114**C may then schedule additional measurements during non-gap related time periods according to the applied requirements. These requirements to perform the measurements may be the same or similar (save the non-gap measurement times) as the higher priority measurements.

[0035] If a user equipment is not able to measure at **230** the low priority carrier(s)/RAT(s) within a certain time, the user equipment may, in some example embodiments, decide to use some of the measurement gap time. For example, if user equipment **114**C has not had a DRX idle period for a certain time (for example, 10 seconds), the user equipment **114**C may allocate a portion of the measurement gap for the lower priority carrier(s)/RAT(s) monitoring. But even in this